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FIG. 1A

9	18	27	36	45	54
CAG AGA GGC TGT ATT TCA GTG CAG CCT GCC AGA CCT CTT CTG GAG GAA GAC TGG					

63	72	81	90	99	108
ACA AAG GGG GTC ACA CAT TCC TTC CAT ACG GTT GAG CCT CTA CCT GCC TGG TGC					

117	126	135	144	153	162
TGG TCA CAG TTC AGC TTC ATG ATG GTG GAT CCC AAT GGC AAT GAA TCC AGT					

M	M	V	D	P	N
G	N	E	S	S	
171	180	189	198	207	216
GCT ACA TAC TTC ATC CTA ATA GGC CTC CCT GGT TTA GAA GAG GCT CAG TTC TGG					

A	T	Y	F	I	L
I	G	L	P	G	L
E	E	A	Q	F	W
225	234	243	252	261	270
TTG GCC TTC CCA TTG TGC TCC CTC TAC CTT ATT GCT GTG CTA GGT AAC TTG ACA					

L	A	F	P	L	C
S	L	Y	L	I	A
V	L	G	N	L	T
279	288	297	306	315	324
ATC ATC TAC ATT GTG CGG ACT GAG CAC AGC CTG CAT GAG CCC ATG TAT ATA TTT					

I	I	Y	I	V	R
T	E	H	S	L	H
E	P	M	Y	I	F
333	342	351	360	369	378
CTT TGC ATG CTT TCA GGC ATT GAC ATC CTC ATC TCC ACC TCA TCC ATG CCC AAA					

L	C	M	L	S	G
I	D	I	L	I	S
T	S	T	S	S	M
S	M	P	K		
387	396	405	414	423	432
ATG CTG GCC ATC TTC TGG TTC AAT TCC ACT ACC ATC CAG TTT GAT GCT TGT CTG					

M	L	A	I	F	W
F	N	S	T	T	I
N	Q	F	D	A	C
441	450	459	468	477	486
CTA CAG ATT TTT GCC ATC CAC TCC TTA TCT GGC ATG GAA TCC ACA GTG CTG CTG					

L	Q	I	F	A	I
H	S	L	S	G	M
S	T	V	L	L	
495	504	513	522	531	540
GCC ATG GCT TTT GAC CGC TAT GTG GCC ATC TGT CAC CCA CTG CGC CAT GCC ACA					

A	M	A	F	D	R
M	D	R	Y	V	A
A	I	C	H	P	L
I	C	H	P	L	R
C	H	P	L	R	H
H	A	P	R	H	A
A	T	L	P	R	I
V	L	T	P	R	V
V	L	T	P	R	L
549	558	567	576	585	594
GTA CTT ACG TTG CCT CGT GTC ACC AAA ATT GGT GTG GCT GTC GTG GTG CGG GGG					

V	L	T	P	R	G
V	L	T	P	R	L
V	L	T	P	R	V
V	L	T	P	R	G
603	612	621	630	639	648
GCT GCA CTG ATG GCA CCC CTT CCT GTC TTC ATC AAG CAG CTG CCC TTC TGC CGC					

A	A	L	M	A	P
M	A	P	L	P	V
A	P	L	P	V	F
P	L	P	V	F	I
L	P	V	F	I	K
P	V	F	I	K	Q
V	F	I	K	Q	L
F	I	K	Q	L	P
I	K	Q	L	P	F
K	Q	L	P	F	C
Q	L	P	F	C	R

FIG. 1B

657 666 675 684 693 702
 TCC AAT ATC CTT TCC CAT TCC TAC TGC CTA CAC CAA GAT GTC ATG AAG CTG GCC

 S N I L S H S Y C L H Q D V M K L A

 711 720 729 738 747 756
 TGT GAT GAT ATC CGG GTC AAT GTC GTC TAT GGC CTT ATC GTC ATC ATC TCC GCC

 C D D I R V N V V Y G L I V I I S A

 765 774 783 792 801 810
 ATT GGC CTG GAC TCA CTT CTC ATC TCC TTC TCA TAT CTG CTT ATT CTT AAG ACT

 I G L D S L L I S F S Y L L I L K T

 819 828 837 846 855 864
 GTG TTG GGC TTG ACA CGT GAA GCC CAG GCC AAG GCA TTT GGC ACT TGC GTC TCT

 V L G L T R E A Q A K A F G T C V S

 873 882 891 900 909 918
 CAT GTG TGT GCT GTG TTC ATA TTC TAT GTA CCT TTC ATT GGA TTG TCC ATG GTG

 H V C A V F I F Y V P F I G L S M V

 927 936 945 954 963 972
 CAT CGC TTT AGC AAG CGG CGT GAC TCT CCG CTG CCC GTC ATC TTG GCC AAT ATC

 H R F S K R R D S P L P V I L A N I

 981 990 999 1008 1017 1026
 TAT CTG CTG GTT CCT CCT GTG CTC AAC CCA ATT GTC TAT GGA GTG AAG ACA AAG

 Y L L V P P V L N P I V Y G V K T K

 1035 1044 1053 1062 1071 1080
 GAG ATT CGA CAG CGC ATC CTT CGA CTT TTC CAT GTG GCC ACA CAC GCT TCA GAG

 E I R Q R I L R L F H V A T H A S E

 1089 1098 1107 1116 1125 1134
 CCC TAG GTG TCA GTG ATC AAA CTT CTT TTC CAT TCA GAG TCC TCT GAT TCA GAT

 P *

 1143 1152 1161 1170 1179 1188
 TTT AAT GTT AAC ATT TTG GAA GAC AGT ATT CAG AAA AAA AAT TTC CTT AAT AAA

 1197 1206 1215 1224 1233 1242
 AAA TAC AAC TCA GAT CCT TCA AAT ATG AAA CTG GTT GGG GAA TCT CCA TTT TTT

 1251 1260 1269 1278 1287 1296
 CAA TAT TAT TTT CTT CTT TGT TTT GCT ACA TAT AAT TAT TAA TAC CCT GAC

 1305 1314 1323 1332 1341 1350
 TAG GTT GTG GTT GGA GGG TTA TTA CTT TTC ATT TTA CCA TGC AGT CCA AAT CTA

FIG. 1C

1359	1368	1377	1386	1395	1404
AAC TGC TTC TAC TGA TGG TTT ACA GCA TTC TGA GAT AAG AAT GGT ACA TCT AGA					
1413	1422	1431	1440	1449	1458
GAA CAT TTG CCA AAG GCC TAA GCA CGG CAA AGG AAA ATA AAC ACA GAA TAT AAT					
1467	1476	1485	1494	1503	1512
AAA ATG AGA TAA TCT AGC TTA AAA CTA TAA CTT CCT CTT CAG AAC TCC CAA CCA					
1521	1530	1539	1548	1557	1566
CAT TGG ATC TCA GAA AAA TGC TGT CTT CAA AAT GAC TTC TAC AGA GAA GAA ATA					
1575	1584	1593	1602	1611	1620
ATT TTT CCT CTG GAC ACT AGC ACT TAA GGG GAA GAT TGG AAG TAA AGC CTT GAA					
1629	1638	1647	1656	1665	1674
AAG AGT ACA TTT ACC TAC GTT AAT GAA AGT TGA CAC ACT GTT CTG AGA GTT TTC					
1683	1692	1701	1710	1719	1728
ACA GCA TAT GGA CCC TGT TTT TCC TAT TTA ATT TTC TTA TCA ACC CTT TAA TTA					
1737	1746	1755	1764	1773	1782
GGC AAA GAT ATT ATT AGT ACC CTC ATT GTA GCC ATG GGA AAA TTG ATG TTC AGT					
1791	1800	1809	1818	1827	1836
GGG GAT CAG TGA ATT AAA TGG GGT CAT ACA AGT ATA AAA ATT AAA AAA AAA AAA					
1845	1854	1863	1872	1881	1890
GAC TTC ATG CCC AAT CTC ATA TGA TGT GGA AGA ACT GTT AGA GAG ACC AAC AGG					
1899	1908	1917	1926	1935	1944
GTA GTG GGT TAG AGA TTT CCA GAG TCT TAC ATT TTC TAG AGG AGG TAT TTA ATT					
1953	1962	1971	1980	1989	1998
TCT TCT CAC TCA TCC AGT GTT GTA TTT AGG AAT TTC CTG GCA ACA GAA CTC ATG					
2007	2016	2025	2034	2043	2052
GCT TTA ATC CCA CTA GCT ATT GCT TAT TGT CCT GGT CCA ATT GCC AAT TAC CTG					
2061	2070	2079	2088	2097	2106
TGT CTT GGA AGA AGT GAT TTC TAG GTT CAC CAT TAT GGA AGA TTC TTA TTC AGA					
2115	2124	2133	2142	2151	2160
AAG TCT GCA TAG GGC TTA TAG CAA GTT ATT TAT TTT TAA AAG TTC CAT AGG TGA					
2169	2178	2187	2196	2205	2214
TTC TGA TAG GCA GTG AGG TTA GGG AGC CAC CAG TTA TGA TGG GAA GTA TGG AAT					
2223	2232	2241	2250	2259	2268
GGC AGG TCT TGA AGA TAA CAT TGG CCT TTT GAG TGT GAC TCG TAG CTG GAA AGT					
2277	2286	2295	2304	2313	2322
GAG GGA ATC TTC AGG ACC ATG CTT TAT TTG GGG CTT TGT GCA GTA TGG AAC AGG					
2331	2340	2349	2358	2367	2376
GAC TTT GAG ACC AGG AAA GCA ATC TGA CTT AGG CAT GGG AAT CAG GCA TTT TTG					

FIG. 1D

2385	2394	2403	2412	2421	2430
CTT CTG AGG GGC TAT TAC CAA GGG TTA ATA GGT TTC ATC TTC AAC AGG ATA TGA					
-----	-----	-----	-----	-----	-----
2439	2448	2457	2466	2475	2484
CAA CAG TGT TAA CCA AGA AAC TCA AAT TAC AAA TAC TAA AAC ATG TGA TCA TAT					
-----	-----	-----	-----	-----	-----
2493	2502	2511	2520	2529	2538
ATG TGG TAA GTT TCA TTT TCT TTT TCA ATC CTC AGG TTC CCT GAT ATG GAT TCC					
-----	-----	-----	-----	-----	-----
2547	2556	2565	2574	2583	2592
TAT AAC ATG CTT TCA TCC CCT TTT GTA ATG GAT ATC ATA TTT GGA AAT GCC TAT					
-----	-----	-----	-----	-----	-----
2601	2610	2619	2628	2637	2646
TTA ATA CTT GTA TTT GCT GCT GGA CTG TAA GCC CAT GAG GGC ACT GTT TAT TAT					
-----	-----	-----	-----	-----	-----
2655	2664	2673	2682	2691	2700
TGA ATG TCA TCT CTG TTC ATC ATT GAC TGC TCT TTG CTC ATC ATT GAA TCC CCC					
-----	-----	-----	-----	-----	-----
2709	2718	2727	2736	2745	2754
AGC AAA GTG CCT AGA ACA TAA TAG TGC TTA TGC TTG ACA CCG GTT ATT TTT CAT					
-----	-----	-----	-----	-----	-----
2763	2772	2781	2790	2799	2808
CAA ACC TGA TTC CTT CTG TCC TGA ACA CAT AGC CAG GCA ATT TTC CAG CCT TCT					
-----	-----	-----	-----	-----	-----
2817	2826	2835	2844	2853	2862
TTG AGT TGG GTA TTA TTA AAT TCT GGC CAT TAC TTC CAA TGT GAG TGG AAG TGA					
-----	-----	-----	-----	-----	-----
2871	2880	2889	2898	2907	2916
CAT GTG CAA TTT CTA TAC CTG GCT CAT AAA ACC CTC CCA TGT GCA GCC TTT CAT					
-----	-----	-----	-----	-----	-----
2925	2934	2943	2952	2961	2970
GTT GAC ATT AAA TGT GAC TTG GGA AGC TAT GTG TTA CAC AGA GTA AAT CAC CAG					
-----	-----	-----	-----	-----	-----
2979	2988	2997	3006	3015	3024
AAG CCT GGA TTT CTG AAA AAA CTG TGC AGA GCC AAA CCT CTG TCA TTT GCA ACT					
-----	-----	-----	-----	-----	-----
3033	3042	3051	3060	3069	3078
CCC ACT TGT ATT TGT ACG AGG CAG TTG GAT AAG TGA AAA ATA AAG TAC TAT TGT					
-----	-----	-----	-----	-----	-----
3087	3096	3105	3114	3123	3132
GTC AAG AAA					
-----	-----	-----	-----	-----	-----
AAA A 3'					
-----	-----	-----	-----	-----	-----

FIG. 2

FIG. 3

GATCAAACCTTTCCATTCAAGAGTCCTCTGATTCAAGATTTAATGTTAACATTGGAAAGACAGTATTCAAGAAAAAA
AATTCCTTAATAAAATACAACCTCAGATCCTCAAATATGAAACTGGTGGGAATCTCCATTTCATTTCAATATTATTT
TCTTCTTGTTTCTTGCTACGTATAATTATTAATATCCTGACTAGGTTGTGGAGGGTTATTACTTTCAATTAA
CCATGCAGTCCAAATCTAAACTGCTTCACTGATGGTTACAGCATTCTGAGATAAGAATGGTACATCTAGAGAACATT
TGCCAAAGCCTAACAGCACAGCAAAGGAAATAAACACAGAATATAATAAAATGAGATAATCTAGCTTAAACTATAACT
TCCTCTTAGAACTCCCAACCACATTGGATC

FIG. 4

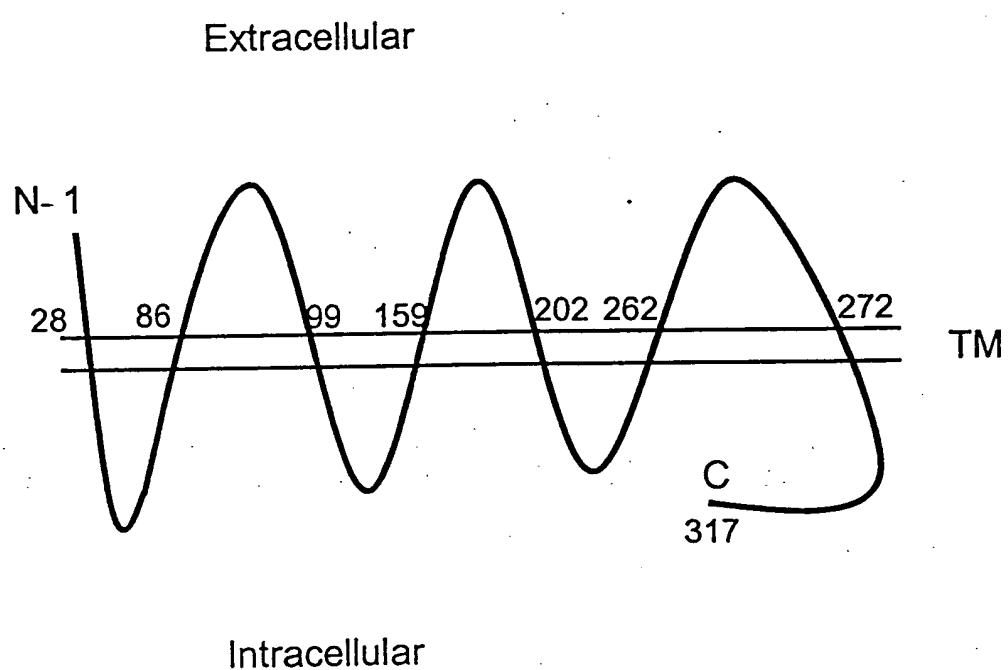


FIG. 5A

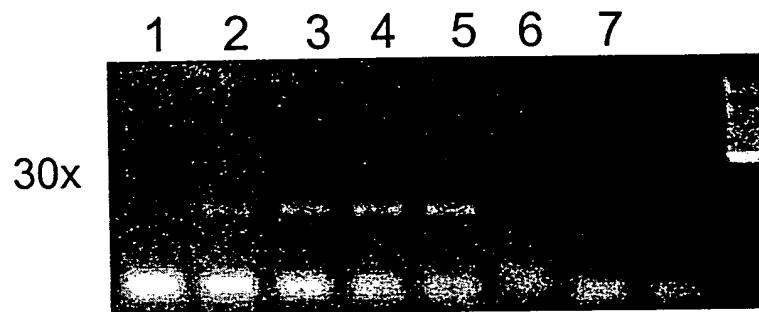


FIG. 5B

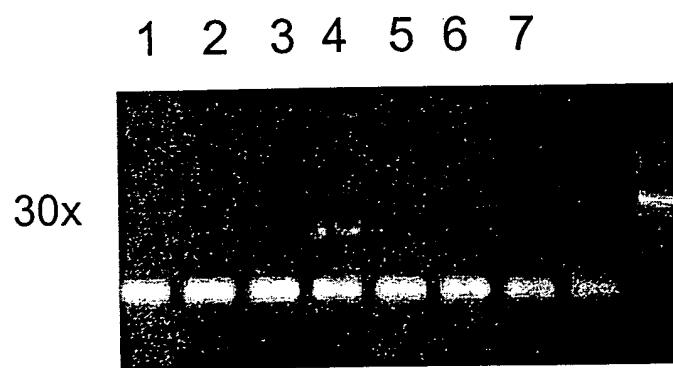


FIG. 6A

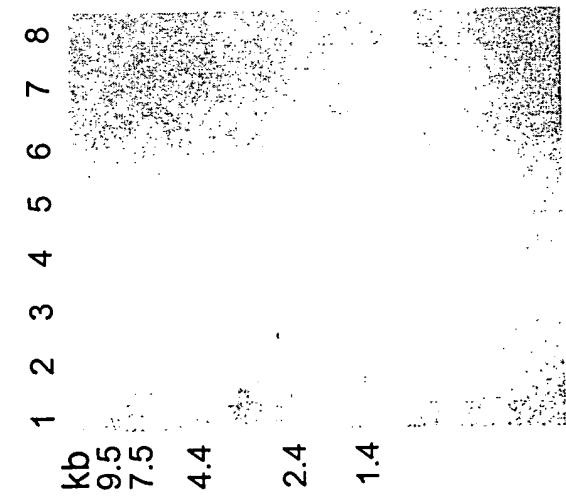


FIG. 6B

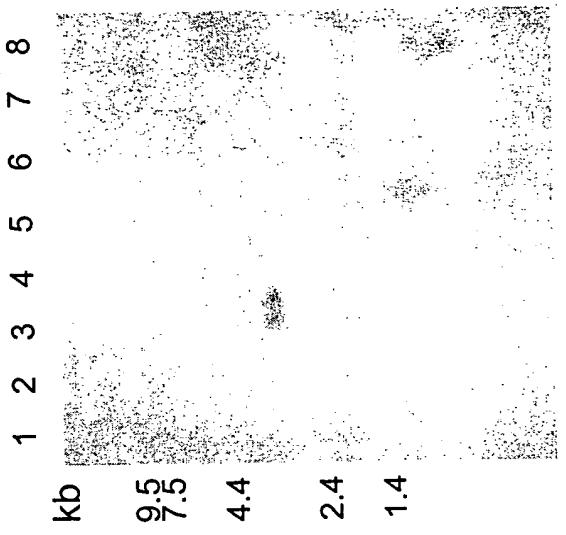


FIG. 6C

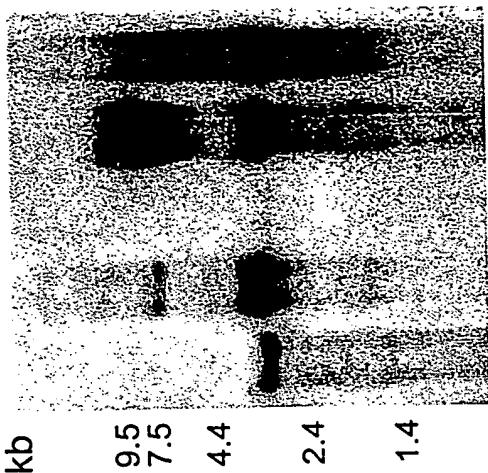


FIG. 7

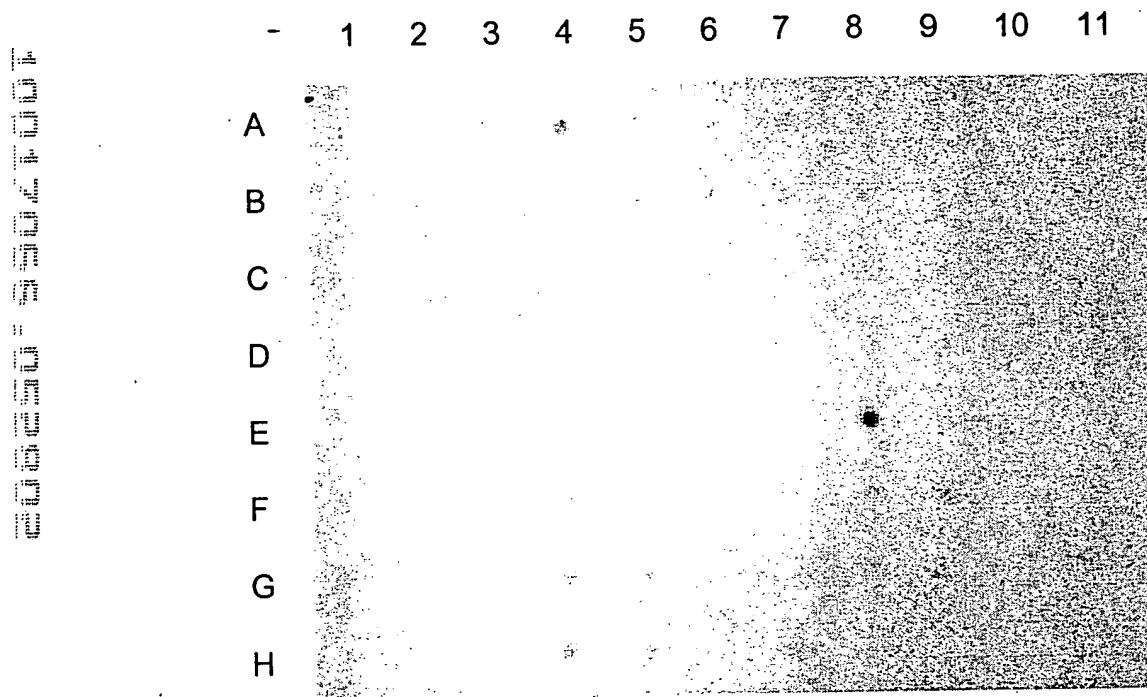


FIG. 8A

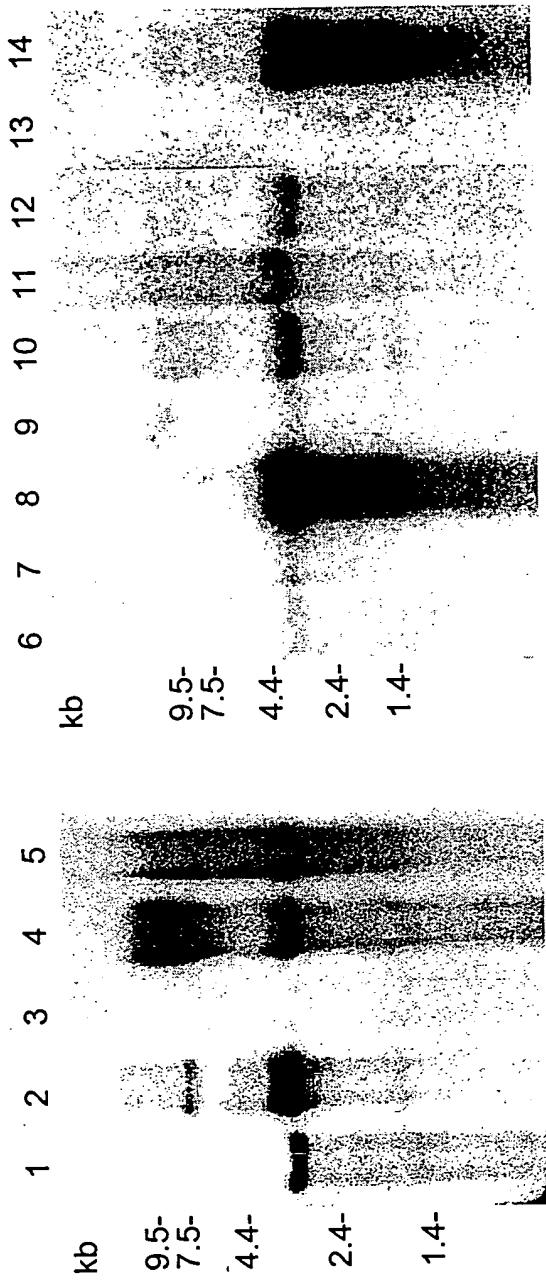


FIG. 8B

Figure 9A

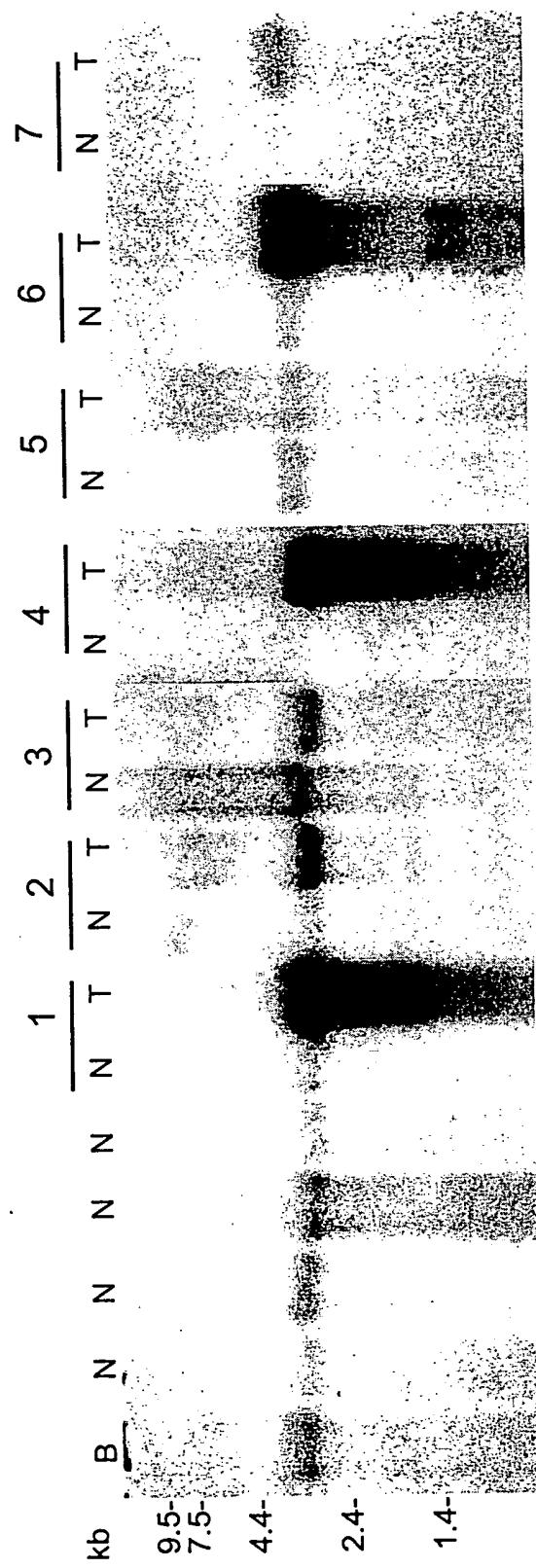


Figure 9B

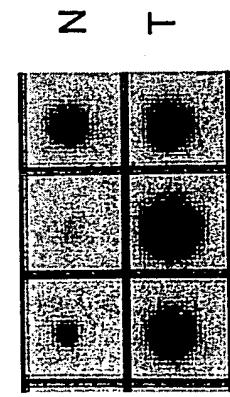


Figure 10

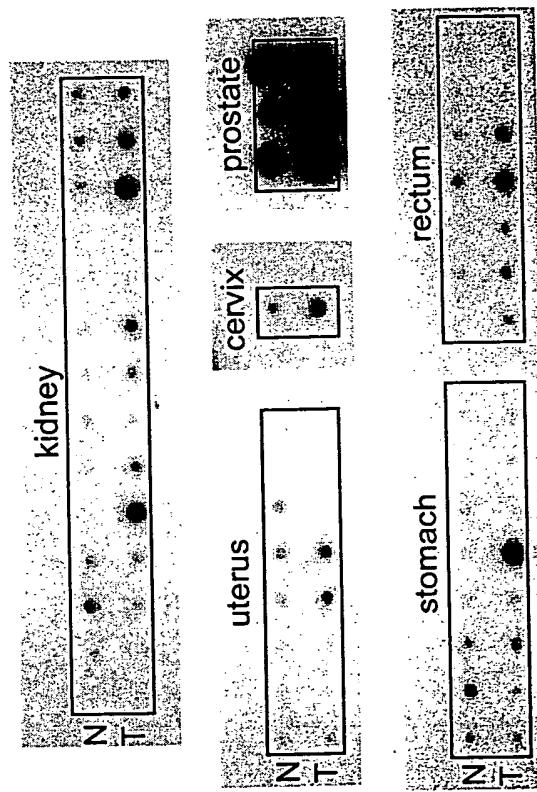


Figure 11A-11B

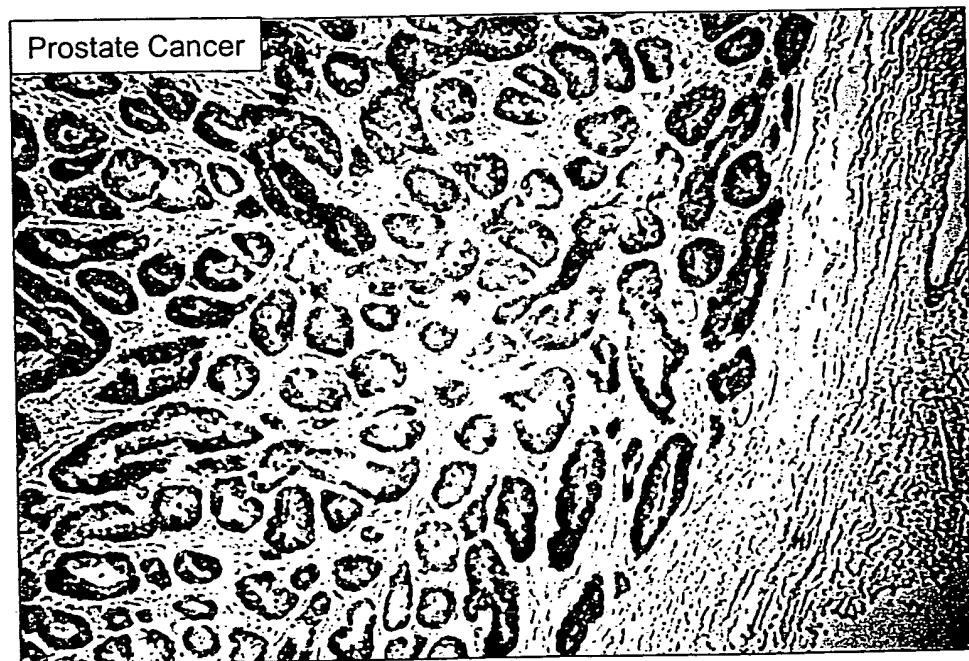


Figure 12A-12B

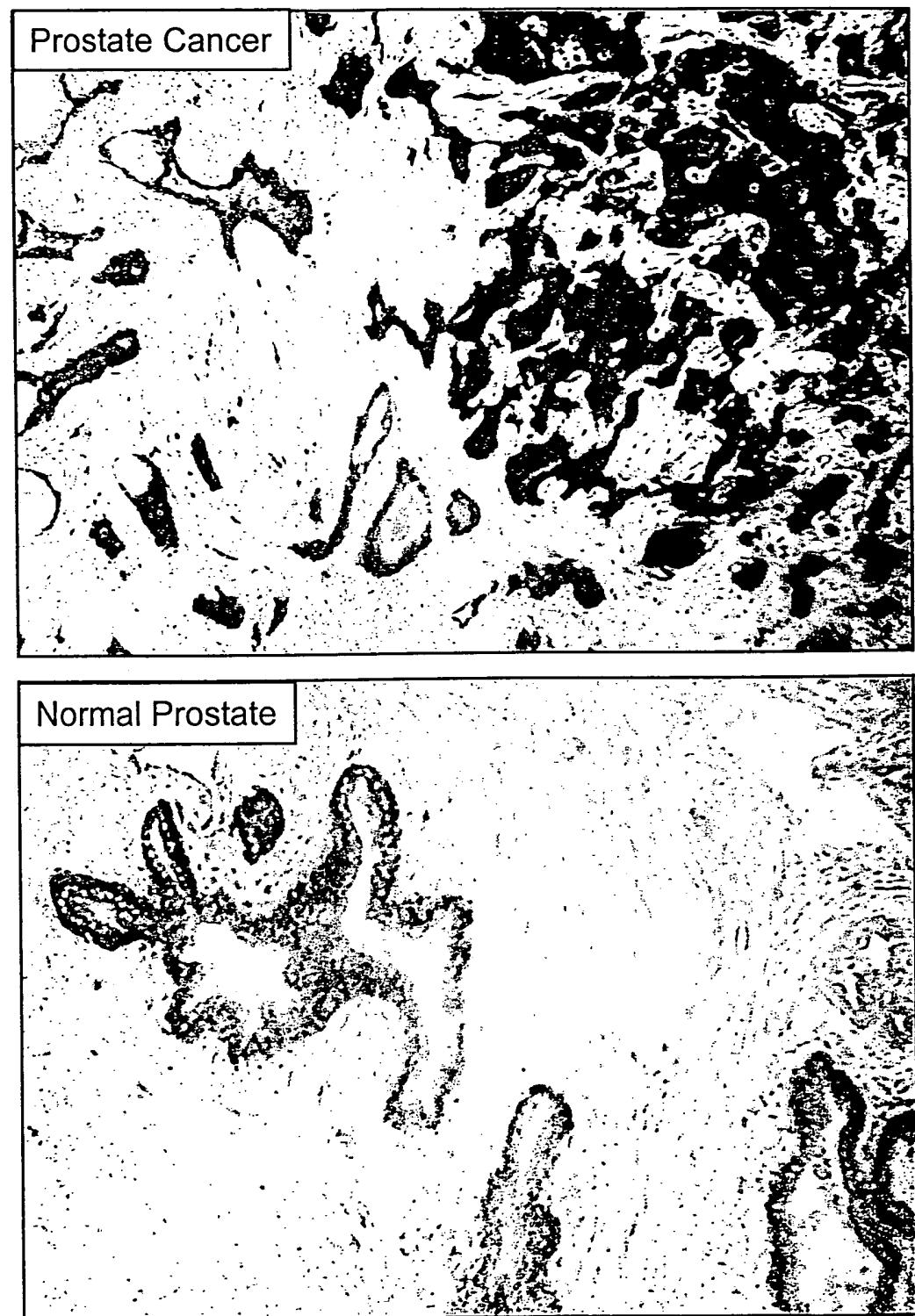


FIG. 13A

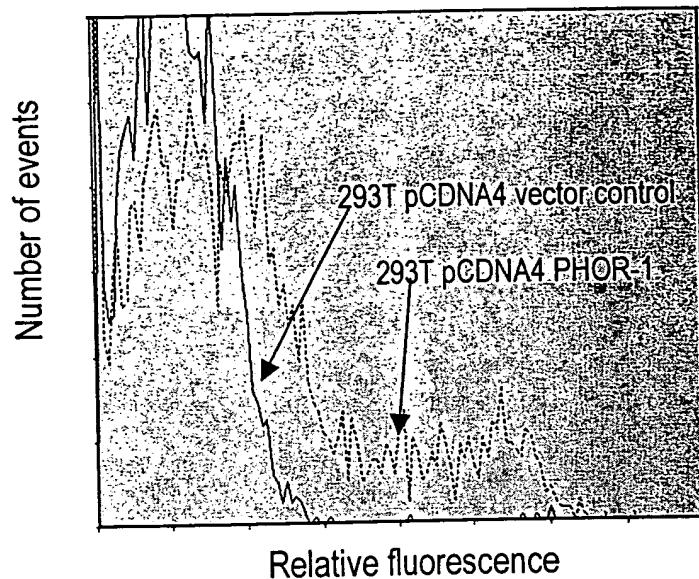


FIG. 13B

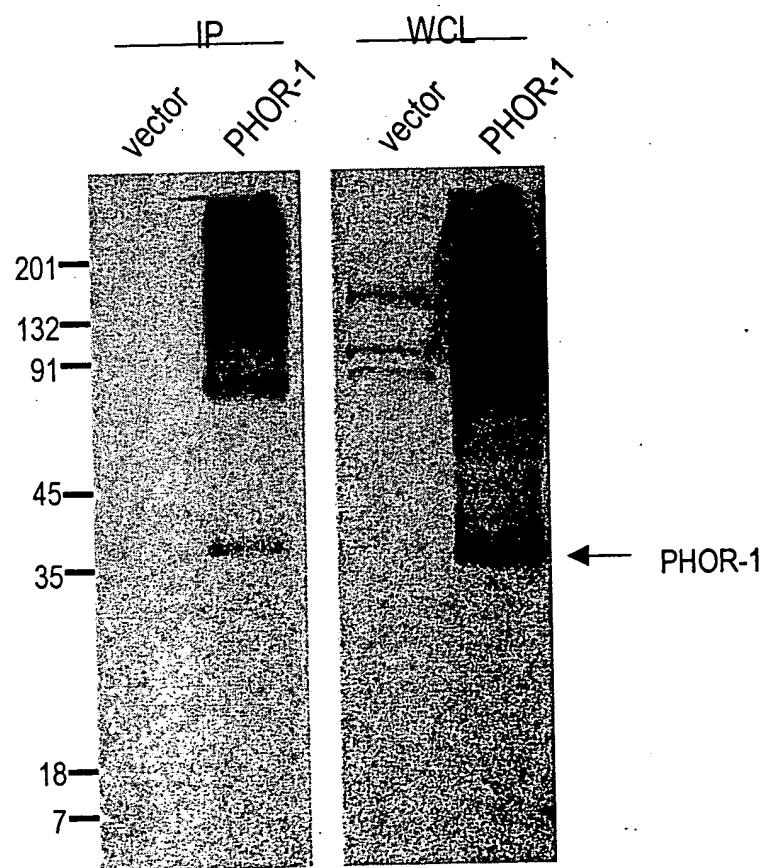


Fig. 14A

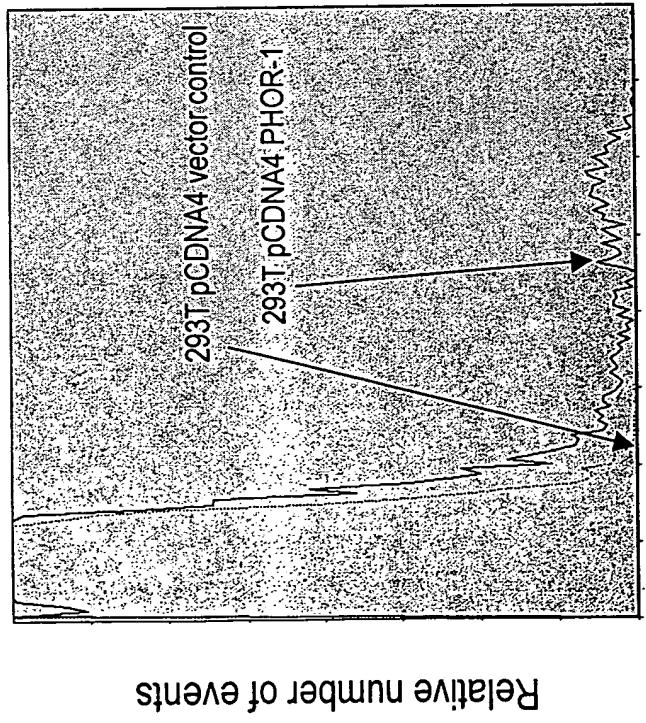


Fig. 14B

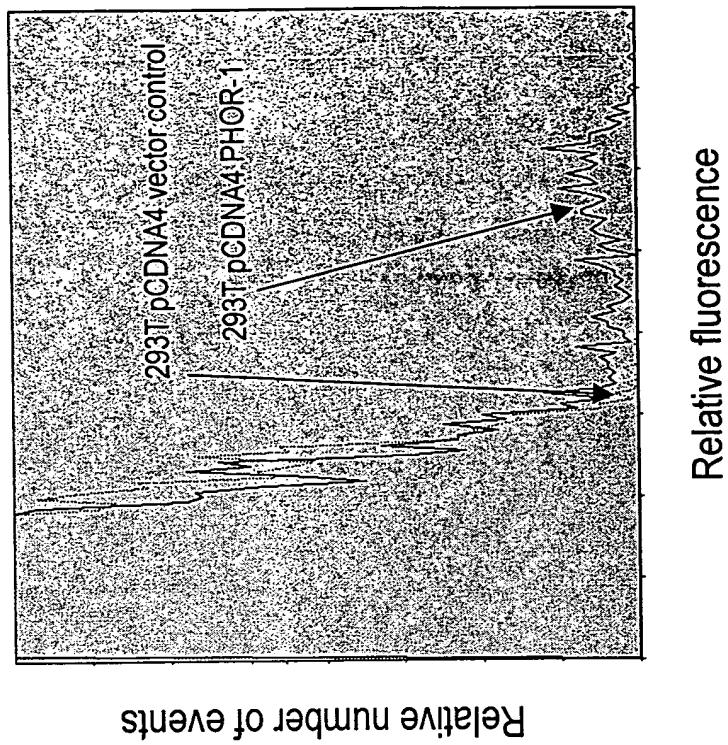


Fig. 15

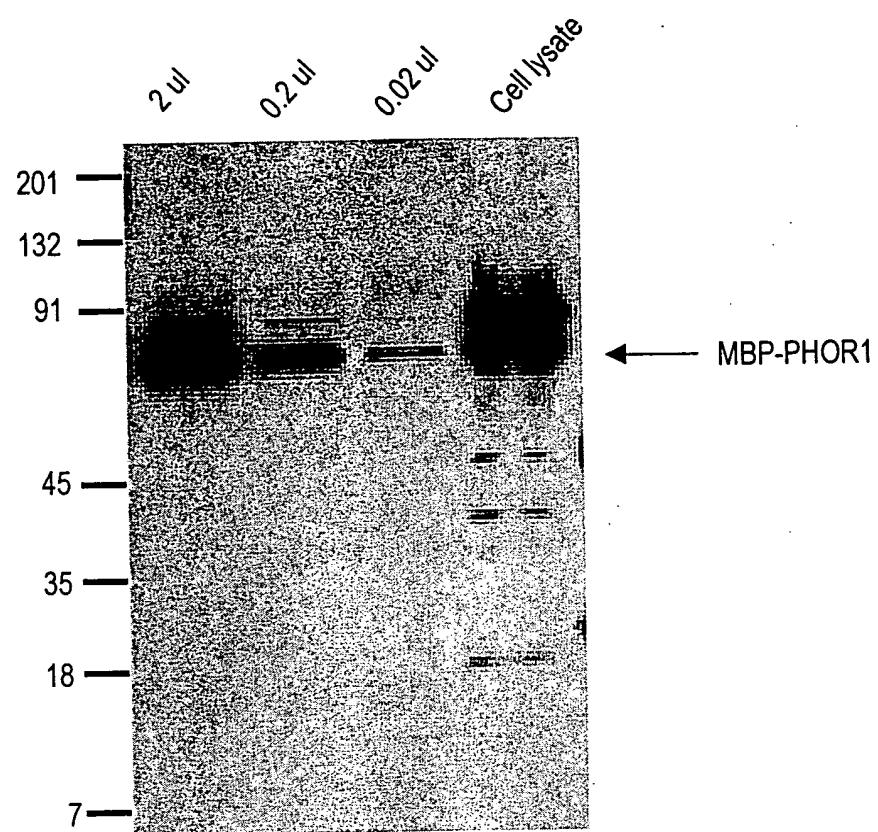


Fig. 16A

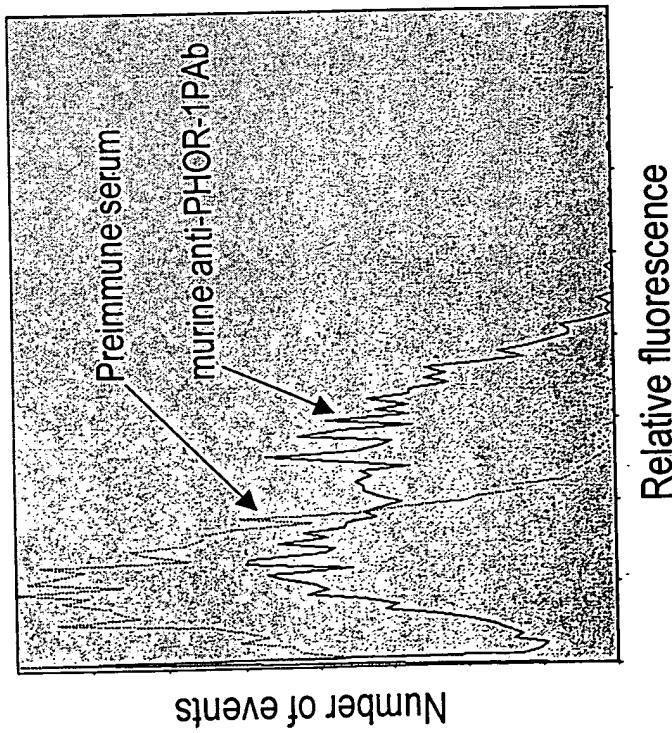
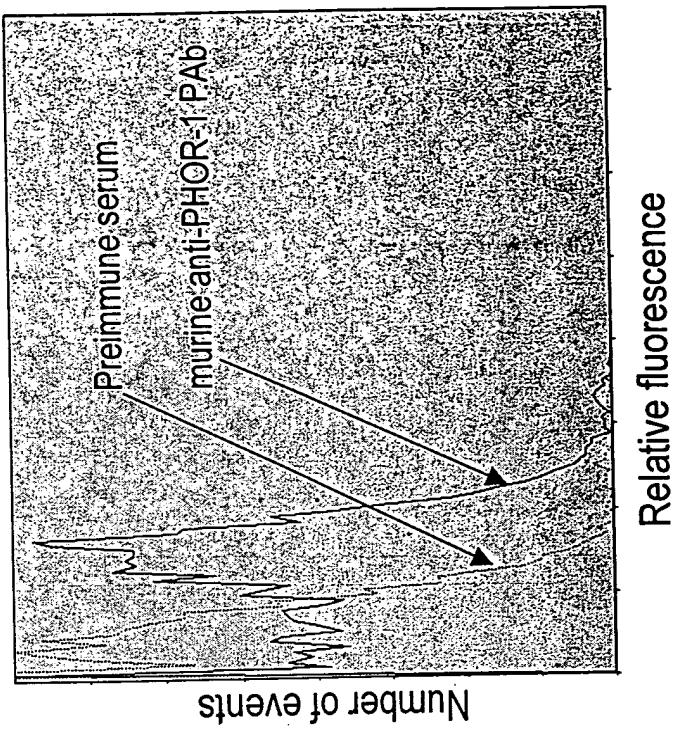


Fig. 16B



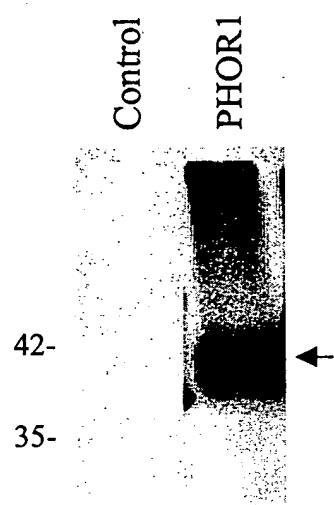


FIG. 17

Figure 18A-F

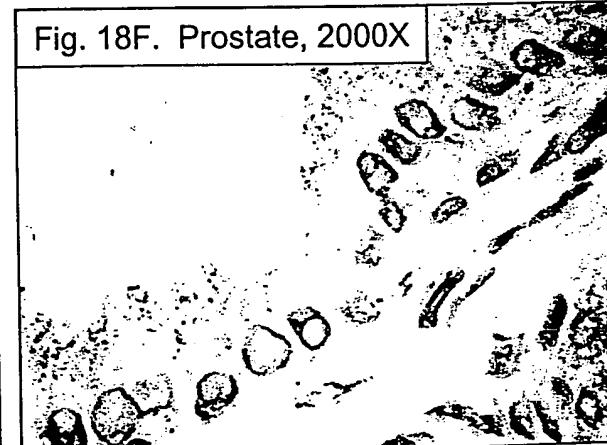
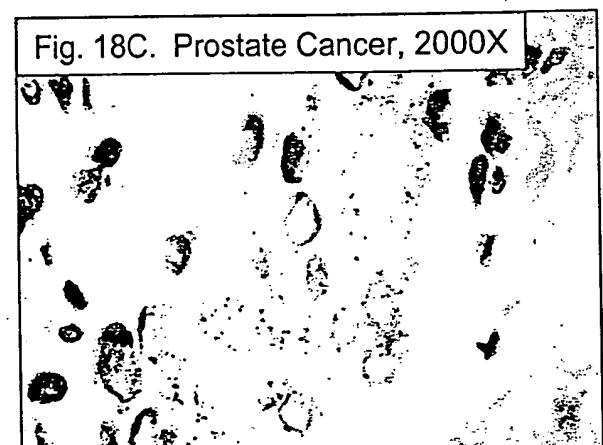
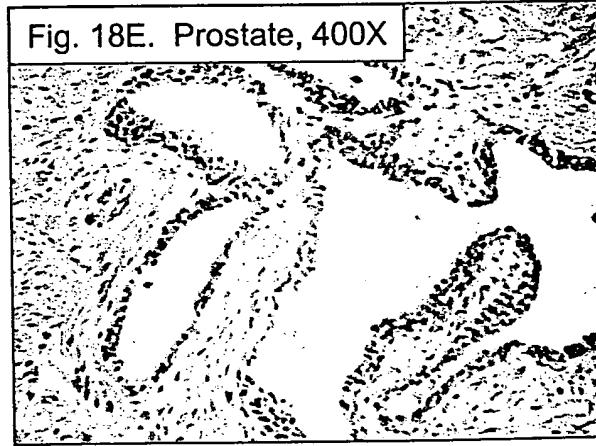
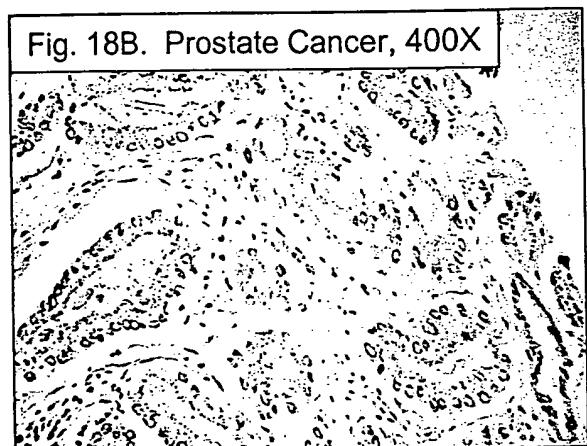
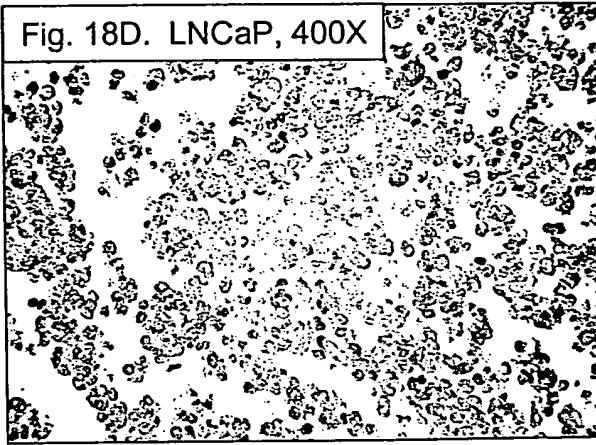
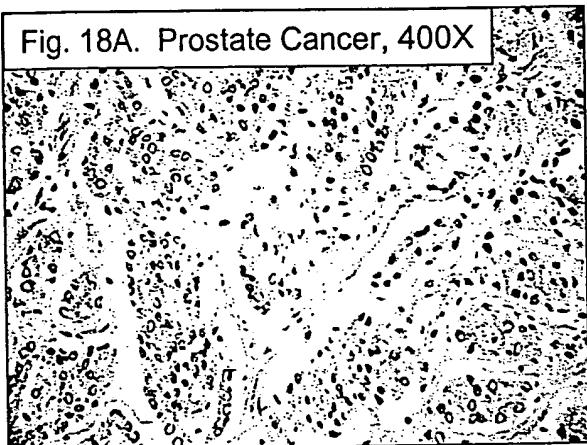


Figure 19A-F

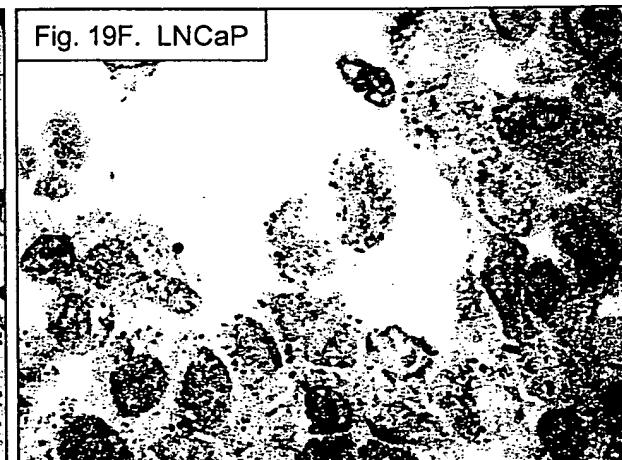
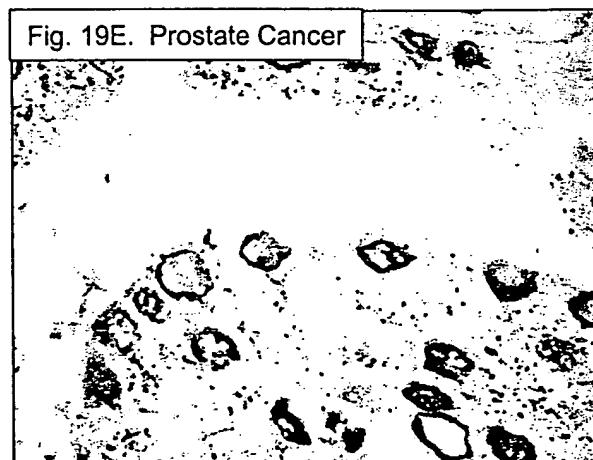
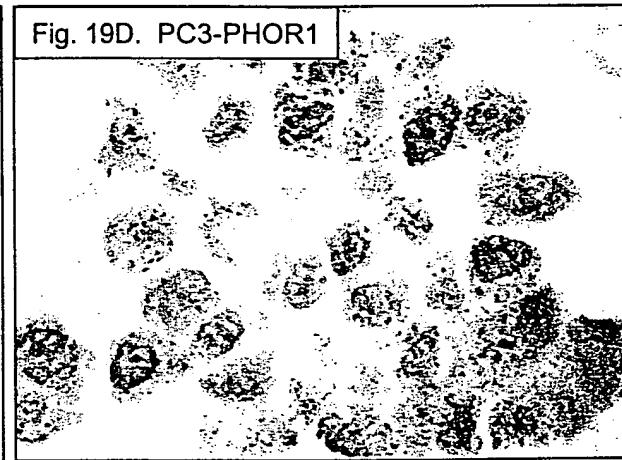
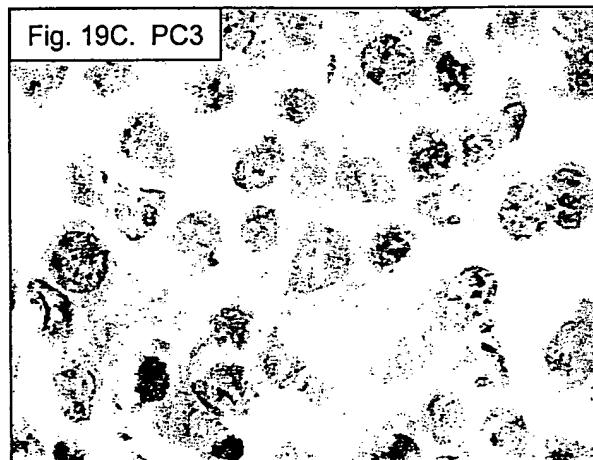
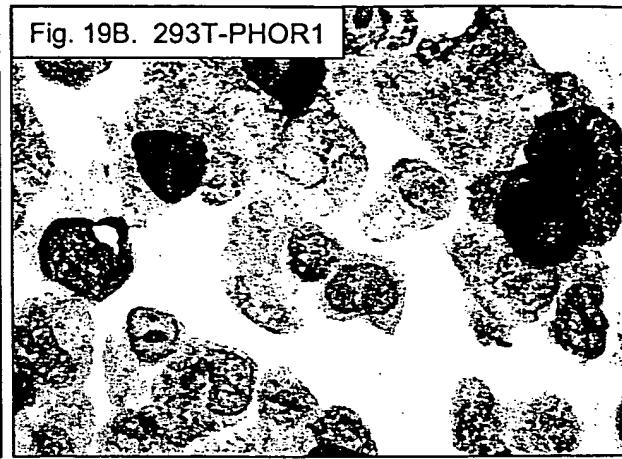
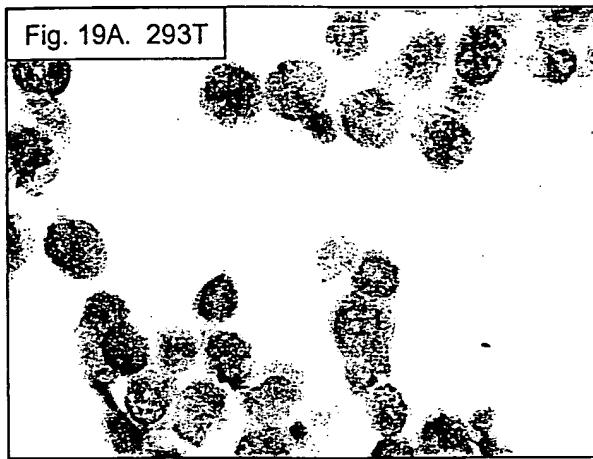


FIG. 20B



FIG. 20A

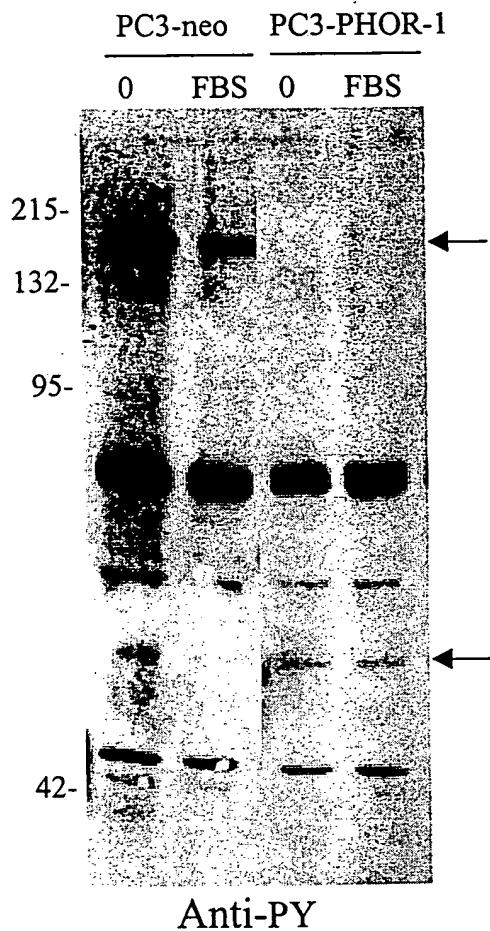
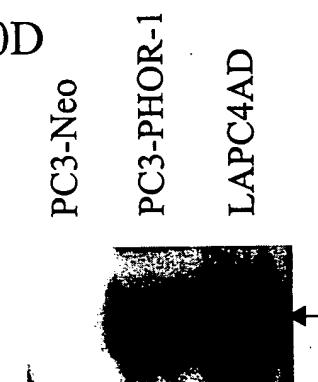


FIG. 20D



PHOR-1 Northern

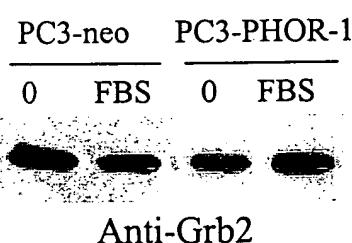


FIG. 20C

FIG. 20E



PHOR1 Northern

Neo



Fig. 21A

PHOR1

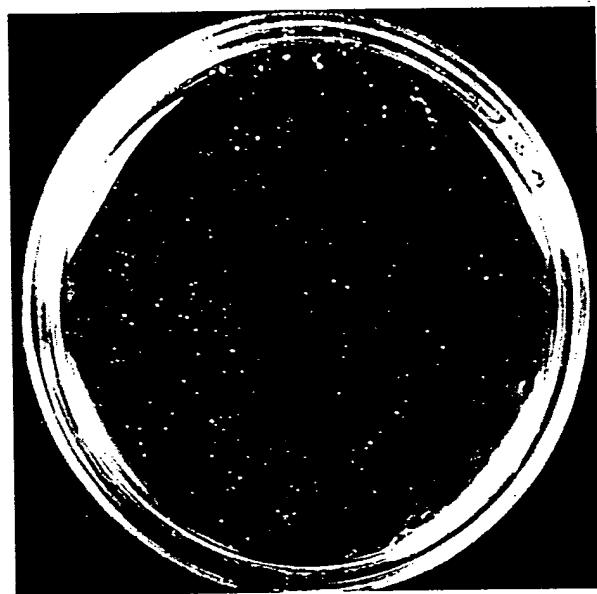


Fig. 21B

Ras

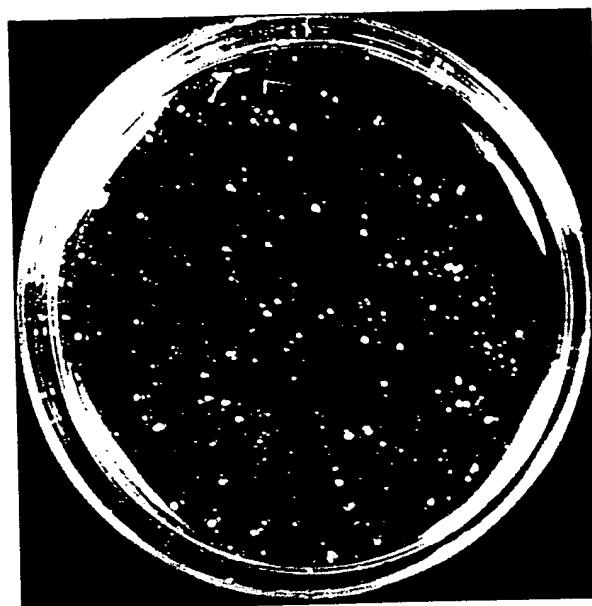


Fig. 21C

FIG. 22

9	18	27	36	45	54
GCT GTG GCC ATG TTT ATT GGA GTG TTG GAT CTA TTC TTT ATC ATC CTA TCT TAT					

A	V	A	M	F	I
G	V	L	D	L	F
F	I	I	I	I	I
S	Y				
63	72	81	90	99	108
ATC TTT ATC CTT CAG GCA GTT CTA CAA CTC TCC TCT CAG GAG GCC CGC TAC AAA					

I	F	I	L	Q	A
V	L	Q	L	S	S
S	Q	E	A	R	Y
K					
117	126	135	144	153	162
GCA TTT GGG ACA TGT GTC TCT CAC ATA GGT GCC ATC TTA GCC TTC TAC ACA CCT					

A	F	G	T	C	V
S	H	I	G	A	I
L	A	F	Y	T	P
171	180	189	198	207	216
TCA GTC ATC TCT TCA GTC ATG CAC CGT GTG GCC CGC TGT GCT GTG CCA CAC GTC					

S	V	I	S	S	V
M	H	R	V	A	R
C	A	V	P	H	V
225	234	243	252	261	270
CAC ATT CTC CTC GCC AAT TTC TAT CTG CTC TTC CCA CCC ATG GTC AAT CCC ATC					

H	I	L	L	A	N
F	Y	L	L	F	P
P	P	M	V	N	P
I					
279	288	297	306	315	324
ATC TAT GGC GTT AAG ACC AAG CAG ATC CGT GAC AGT CTT GGG AGT ATT CCT GAG					

I	Y	G	V	K	T
Q	I	R	D	S	L
S	I	P			E
333	342	351	360	369	378
AAA GGA TGT GTG AAT AGA GAG TGA GGA ATA AGT GGA AAA AGA GTG GGG CCC AGT					

K	G	C	V	N	R
E	*				
387	396	405	414	423	432
GAA TGC TGT AGT GGG CCA GGG CTG TGC TGA GAG TAG ATG GGT CCT AGA CTC CAC					

441	450	459	468	477	486
GTT TAG TTC TTT TCT TGT ATT ATG AAA AGA ATA AAT GAT GTC CTG AAG CTC AGA					

495					
AAA AAA AAA AAA AAA 3'					
